

### *Abstract*

A method and system and computer program product for automatically creating computer simulations or analyses of signal transfers of a circuit or system design are disclosed. A description of a physical design of a circuit or system is provided. The physical design has physical components and at least one of the physical components may transfer a signal to at least one other physical component. The physical design description includes an identification of the physical components and information descriptive of physical inter-connectivity among the physical components. A signal transfer description is provided for at least one signal transfer. The signal transfer description includes a set of source nodes and a set of receiver nodes. The set of source nodes provide the signal to be transferred and the receiver nodes receive the signal transferred from the corresponding set of source nodes. Each node is described by information associated with physical components. A signal transfer description is identified as corresponding to at least a portion of the physical inter-connectivity information. The information in the corresponding signal transfer description is used to construct computer simulations or analyses of the corresponding physical inter-connectivity.